

ACETIC ANHYDRIDE

0209
April 2006

CAS No: 108-24-7
RTECS No: AK1925000
UN No: 1715
EC No: 607-008-00-9

Acetic acid, anhydride
Acetic oxide
Ethanoic anhydride
Acetyl oxide
 $C_4H_6O_3/(CH_3CO)_2O$
Molecular mass: 102.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Flammable.	NO open flames, NO sparks, and NO smoking.	Alcohol-resistant foam, powder, carbon dioxide (see Notes).
EXPLOSION	Above 49/C explosive vapour/air mixtures may be formed.	Above 49/C use a closed system, ventilation, and explosion-proof electrical equipment.	In case of fire: cool drums, etc., by spraying with water but avoid contact of the substance with water.

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Cough. Laboured breathing. Shortness of breath. Sore throat.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
Skin	Redness. skin burns. Pain. Blisters. Effects could be delayed	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Causes watering of the eyes. Redness. Pain. Burns.	Face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Abdominal pain. Burning sensation. Shock or collapse.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Personal protection: filter respirator for acid gases. Chemical protection suit. Use face shield. Consult an expert! Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place.	EU classification C Symbol R: 10-20/22-34 S: (1/2-)26-36/37/39-45 UN classification UN Hazard Class: 8 UN Subsidiary Risks: 3 UN Pack Group: II GHS classification Signal: Danger Flame-Corr-Excl mark Flammable liquid and vapour Harmful if swallowed Causes severe skin burns and eye damage Causes serious eye damage Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-80S1715 NFPA Code: H 2; F 2; R 1; W	Fireproof. Separated from food and feedstuffs, incompatible substances (see Chemical Dangers). Dry.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS LIQUID, WITH PUNGENT ODOUR.

Chemical dangers

The substance decomposes on burning producing toxic gases and toxic fumes including acetic acid fumes. Reacts violently with alcohols, amines, oxidants, strong bases and water. Attacks many metals in presence of water or when dry.

Occupational exposure limits

TLV: 5 ppm as TWA (ACGIH 2006).

MAK: 5 ppm 21 mg/m³ Peak limitation category: I (I) Pregnancy risk group: D (DFG 2006).

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20/C.

Effects of short-term exposure

Tear drawing. The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of the substance may cause asthma-like reactions.

Effects of long-term or repeated exposure

Inhalation of the substance may cause asthma-like reactions (RADS).

PHYSICAL PROPERTIES

Boiling point: 139/C

Melting point: -73/C

Relative density (water = 1): 1.08

Solubility in water: Reaction

Vapour pressure, kPa at 20/C: 0.5

Relative vapour density (air = 1): 3.5

Relative density of the vapour/air-mixture at 20/C (air = 1): 1.01

Flash point: 49/C c.c.

Auto-ignition temperature: 316/C

Explosive limits, vol% in air: 2.7-10.3

Octanol/water partition coefficient as log Pow: -0.27

ENVIRONMENTAL DATA

NOTES

Forms acetic acid when mixed with water.

Major fires must be extinguished with large amounts of water from a distance.

Card has been partially updated in July 2007: see Occupational Exposure Limits.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information